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REMARKS

Applicants have amended Claims 2, 5-7, 10, 18, 25, 31-32, 35-37, 57, 62, 64 and 70 and cancelled Claim 1 as shown herein. Applicants respectfully submit that the claim amendments are supported by the specification and request entry of same.

Applicants respectfully submit that all the claims are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested in due course. If any minor informalities need to be addressed, the Examiner is directed to contact the undersigned attorney by telephone to facilitate prosecution of this case.

Respectfully submitted,

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CERTIFICATE OF MAILING

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Barbara Yates

Barbara Yates

Version with Markings to Show Changes Made:

In the Claims:

Please cancel Claim 1, without prejudice.

2. (Rewritten) A [The] positive electrode active material [according to Claim 1,] for secondary lithium and lithium-ion batteries comprising:

at least one electron conducting compound having the formula $LiM^1_{x-y}\{A\}_yO_z$ wherein M^1 is a transition metal; {A} is represented by the formula Σw_iB_i wherein B_i is an element other than M^1 used to replace the transition metal M^1 and w_i is the fractional amount of element B_i in the total dopant combination such that $\Sigma w_i = 1$; B_i is a cation in $LiM^1_{x-y}\{A\}_yO_z$; $0.95 \leq x \leq 1.05$; $0 \leq y \leq x/2$; and $1.90 \leq z \leq 2.10$; and

at least one electron insulating and lithium ion conducting lithium metal oxide [wherein the lithium metal oxide is] selected from the group consisting of $LiAlO_2$ and $Li_2M^2O_3$, wherein M^2 is at least one tetravalent metal selected from the group consisting of Ti, Zr, [Sn,] Mn, Mo, Si, Ge, Hf, Ru and Te.

5. (Amended) The positive electrode active material according to Claim [1] 2, comprising from greater than or equal to 95% by weight and less than 100% by weight of $LiM^1_{x-y}\{A\}_yO_z$ and greater than 0% by weight and less than or equal to 5% by weight of the lithium metal oxide.

6. (Amended) The positive electrode active material according to Claim [1] 2, wherein M^1 is selected from the group consisting of Co, Ni, Mn and Ti.

7. (Amended) The positive electrode active material according to Claim [1] 2, wherein x=1 and z=2.

10. (Amended) The positive electrode active material according to Claim [1] 2,

wherein $y > 0$.

18. (Amended) The positive electrode active material according to Claim [1] 2, wherein x, y and z are values that provide a stable lithium metal oxide compound.

25. (Amended) The positive electrode active material according to Claim [1] 2, wherein the $LiM^1_{x-y}\{A\}_yO_z$ compound has the formula $LiNi_{1-y}Co_aM^3_bM^4_cO_2$, wherein M^3 is selected from the group consisting of Ti, Zr, and combinations thereof; M^4 is selected from the group consisting of Mg, Ca, Sr, Ba, and combinations thereof; $y=a+b+c$, $0 < y \leq 0.5$; $0 < a < 0.5$; $0 < b \leq 0.15$; and $0 < c \leq 0.15$.

31. (Amended) The positive electrode active material according to Claim [1] 2, further comprising at least one electron insulating and lithium-ion conducting metal oxide.

32. (Amended) The positive electrode active material according to Claim 31, wherein the metal oxide has the formula MO_2 wherein M is at least one tetravalent metal selected from the group consisting of Ti, Zr, [Sn,] Mo, Si, Ge, Hf, Ru and Te.

35. (Amended) A positive electrode for a secondary lithium or lithium-ion battery comprising the positive electrode active material of Claim [1] 2, a carbonaceous material and a polymer binder.

36. (Amended) A secondary lithium or lithium-ion battery comprising a positive electrode, a negative electrode and a nonaqueous electrolyte, wherein the positive electrode includes the positive electrode active material of Claim [1] 2.

37. (Amended) A positive electrode active material for secondary lithium and lithium-ion batteries comprising at least one compound of the formula $LiM^1_{x-y}\{A\}_yO_z$ and at least one lithium metal oxide selected from the group consisting of $LiAlO_2$ and $Li_2M^2O_3$, wherein M^1 is a

transition metal, M^2 is at least one tetravalent metal selected from the group consisting of Ti, Zr, [Sn,] Mn, Mo, Si, Ge, Hf, Ru and Te, {A} is represented by the formula $\Sigma w_i B_i$ wherein B_i is an element other than M^1 used to replace the transition metal M^1 and w_i is the fractional amount of element B_i in the total dopant combination such that $\Sigma w_i = 1$; B_i is a cation in $LiM^1_{x-y}\{A\}_yO_z$; $0.95 \leq x \leq 2.10$; $0 \leq y \leq x/2$; and $1.90 \leq z \leq 4.20$.

57. (Amended) The positive electrode active material according to Claim 56, wherein the metal oxide has the formula MO_2 wherein M is at least one tetravalent metal selected from the group consisting of Ti, Zr, [Sn,] Mo, Si, Ge, Hf, Ru and Te.

62. (Amended) A method of preparing a positive electrode active material for secondary lithium and lithium-ion batteries, the positive electrode active material including separate lithium metal oxide phases corresponding to the formulas $LiM^1_{x-y}\{A\}_yO_z$ and $Li_2M^2O_3$ or $LiAlO_2$, comprising the steps of:

intimately mixing source compounds containing M^1, Li and optionally {A} in amounts sufficient to provide a stoichiometric relationship between M^1, Li and {A} corresponding to the formula $LiM^1_{x-y}\{A\}_yO_z$ wherein M^1 is a transition metal, {A} is represented by the formula $\Sigma w_i B_i$ wherein B_i is an element other than M^1 used to replace the transition metal M^1 and w_i is the fractional amount of element B_i in the total dopant combination such that $\Sigma w_i = 1$; B_i is a cation in $LiM^1_{x-y}\{A\}_yO_z$; at least one of M^1 and B_i is selected from the group consisting of Ti, Zr, [Sn,] Mn, Mo, Si, Al, Ge, Hf, Ru and Te; $0.95 \leq x \leq 2.10$; $0 \leq y \leq x/2$; and $1.90 \leq z \leq 4.20$;

firing the mixture in the presence of oxygen at an initial firing temperature and optionally one or more additional firing temperatures, at least one of said initial firing temperature and optionally one or more additional firing temperatures being the maximum firing temperature and at least one of said initial firing temperature and optionally one or more additional firing temperatures being between about 700°C and about 1000°C, wherein said firing step comprises heating the mixture at a sufficiently slow rate from 500°C to the maximum firing temperature to produce separate lithium metal oxide phases including $LiM^1_{x-y}\{A\}_yO_z$ and $LiAlO_2$ or $Li_2M^2O_3$, wherein M^2 is one of M^1 and B_i, and M^2 is selected from the group consisting of Ti, Zr, [Sn,]

Mn, Mo, Si, Ge, Hf, Ru and Te; and

cooling the $LiM^1_{x-y}\{A\}_yO_z$ and $Li_2M^2O_3$ or $LiAlO_2$ compounds.

64. (Amended) The method according to Claim 62, wherein said firing step comprises heating the mixture at a sufficiently slow rate from 500°C to the maximum firing temperature to produce separate lithium metal oxide phases including $LiM^1_{x-y}\{A\}_yO_z$, $Li_2M^2O_3$ and M^2O_2, wherein one of M^1 and B_i is M^2 and M^2 is selected from the group consisting of Ti, Zr, [Sn,] Mo, Si, Ge, Hf, Ru and Te.

70. (Amended) The method according to Claim 62, wherein one of M^1 and B_i is selected from the group consisting of Ti, Zr, [Sn,] Mn, Mo, Si, Ge, Hf, Ru and Te.